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**Rieke et al.**

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(54) **PROCESS OF MAKING POROUS ELECTRODES**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 986 days.

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(57) **ABSTRACT**

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(52) **U.S. Cl.** ..... **427/115**; 427/123; 427/243; 427/383.1

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427/123, 243, 383.1

See application file for complete search history.

Methods and feedstock compositions for preparing porous electrodes as contained in lithium ion and lithium polymer batteries that comprise an electrolyte composition are described. The methods are characterized by depositing on a substrate a feedstock having a soluble pore former, precipitating at least a portion of the soluble pore former from the feedstock, and dissolving the solid pore former from the electrode using at least a portion or constituent of the electrolyte composition. The feedstock compositions are characterized by a pore former that forms a two-phase system with at least one constituent of the electrolyte composition. The feedstock does not contain materials that are not also substantially contained in the lithium ion battery.

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**13 Claims, 4 Drawing Sheets**

